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INGMAN *et al.*
Appl. No. 09/884,463***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-8, 11-14, 16-30, 33-49 and 51-62 are pending in the application. Claims 7, 12, 13, 20, 25, 30, 33, 41, 53, 56 and 62 are amended. Claims 10 and 32 are canceled without prejudice or disclaimer. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

In the Office Action dated December 13, 2005, claims 10 and 32 are objected to as being of improper dependent form. Claim 33 is objected to due to an antecedent basis problem. Claim 25 is rejected under 35 U.S.C. § 112, second paragraph, due to an antecedent basis problem. Claims 16-21, 33-35, 42, 48, 49, 51, 55 and 63 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Lange et al., U.S. Patent No. 4,705,571. Claims 22-32, 43, 56, 64 and 65 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Lange et al.. Claims 38 and 39 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Lange et al. in view of Baney et al., U.S. Patent No. 4,275,118. Claims 40 and 41 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Lange and further in view of Tanaka et al., U.S. Patent No. 4,675,040. Claims 44, 45, 46, 47, 57 and 66 are allowed. Claims 1-8, 10-14, 53, 54 and 58-62 would be allowable if rewritten or amended to overcome the

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objections. Claims 36, 37 and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Allowed Claims 44, 45, 46, 47, 57 and 66

Applicants thank the Examiner for the allowance of these claims.

Allowable Claims

Applicants thank the Examiner for indicating the allowability of claims 1-8, 10-14, 53, 54 and 58-62. Claims 10 and 32 have been cancelled. Applicants believe that this addresses the objections, and that claims 1-8, 11-14, 53, 54 and 58-62 are now in condition for allowance.

Applicants also thank the Examiner for indicating the allowability of dependent claims 36, 37 and 52, subject to being rewritten in independent form. The rejections of the base claims are addressed below.

Rejections Based on Lange et al.

Since all the rejections are based, one way or another, on Lange et al., singly or in combination with other references. At the outset, Applicants respectfully submit that the Office Action is in error when it comes to interpreting Lange. Applicants' disclosure is directed to optical fibers used for light transmission. Lange is directed to cables, not optical fibers. This has fundamental implications for what the various elements of Lange do, and how they are constructed. A "cladding" has a specific, and well-defined meaning in the art, and must have specific optical properties. As the Examiner is, of course, aware, to transmit light through fiber, optical properties of the cladding are critical - the cladding needs to have a lower index of refraction than the core. Without this fundamental optical property, there would be no total internal reflection of light within the fiber, and no light transmission down the fiber.

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Lange is not concerned with any optical properties; rather, Lange is concerned with mechanical construction and mechanical performance of cables that contain already manufactured fibers. This is entirely different than transmission of light in fiberoptics. The Office Action referred to FIG. 2 of Lange as anticipating claim 16. This is incorrect. Claim 16 recites “the plurality of cores is embedded within the same cladding layer.” FIG. 2 of Lange does not show this. FIG. 2 of Lange shows the precise opposite – each fiber core has its own filler around it, and its own coating.

FIG. 2 of Lange thus shows three fibers embedded in a filling compound. The filling compound (FC) is not a cladding layer, does not act as a cladding layer, and its optical properties are irrelevant. There is a specific reason why Lange never refers to the filling compound as a “cladding” – it would be manifestly incorrect, and would be understood by anyone skilled in the art as being incorrect. Lange is, in fact, very careful in the use of his terminology – in Lange, the fiber is an entire fiber, and not just a core (light wave guide), the filling compound FC is exactly that – a filling compound, and not a cladding. In sum, Applicants respectfully submit that the Office Action is incorrect as a matter of universally understood definitions and terminology in this art.

The Office Action also contends that the cladding is thixotropic, see page 4, line 1 of the Office Action. Again, the reference to “thixotropic agent” at column 8, line 1 is in reference to the filling compound (FC) in a cable structure – not to the cladding layer in an optical fiber structure. Nothing in Lange *et al.* teaches or suggests, in any way, that the cladding of an optical fiber should be thixotropic. Thus, at least for these reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 16 based on Lange *et al.*

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Claim 33 recites the step of "coating the fiber core with a thixotropic cladding layer." At least this aspect is not disclosed in Lange *et al.* As discussed above, Lange's disclosure is directed to a cable with particular mechanical properties, and the use of a particular filling compound (FC). Nothing in Lange teaches or suggests a cladding layer that is thixotropic. Reconsideration and withdrawal of the rejection of claim 33 is therefore respectfully requested.

Independent claim 48 recites "a thixotropic cladding layer around the core and having hydrophobic and hydrophilic nano-particles." At least this aspect is not disclosed in Lange *et al.*, as discussed at length above. Lange does not disclose a thixotropic cladding layer it is the filler in Lange that is thixotropic. Reconsideration and withdrawal of the rejection of claim 48 is respectfully requested.

Since all of the rejections of the independent claims are based on an incorrect interpretation of Lange, Applicants respectfully submit that these claims, as well as all of their dependent claims, are allowable. Reconsideration and withdrawal of all the rejections is therefore respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

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Prompt and favorable consideration of this Amendment and Reply is respectfully
requested.

Respectfully submitted,

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